To: Mr. Philip Allen, USEPA, Remediation Project Manager

From: Michael Smith, TCEQ, on behalf of Federal and State Natural Resource Trustees

Date: December 3, 2010

Re: Patrick Bayou Superfund Site, Harris County, TX
Comments on the *Draft Baseline Ecological Risk Assessment Work Plan, dated September 2010 and Draft Fish and Invertebrate Tissue Sampling and Analysis Plan, dated June 2010*

The Trustees appreciate the opportunity to comment on the above-referenced documents prepared by Anchor QEA and submitted on behalf of the Patrick Bayou Joint Defense Group (JDG). We are providing the following comments that follow the format taken in the document. It should be noted that additional comments on these documents may be forthcoming from the Trustees in the near future. Please let us know if there are any questions.

Draft Baseline Ecological Risk Assessment Work Plan Comments:

General Comments

1. Additional sampling of sediment and surface water was performed at the site in October and November 2009. Previous data collection was performed at the site between 2000 and 2006. It is noted in this Work Plan that data from previous historical sampling events (2000-2006) may be utilized as required to supplement the 2009 data. Please describe the rationale used to determine when it would be appropriate to use data prior to 2009 and where this historical data will be used to supplement data in the BERA.

2. The data used in the predictive model to assess risk to benthic invertebrates will include analytical samples collected as part of the TMDL sampling events (Parsons et al. 2002, 2004). The work plan states that historical bioassay data from the TMDL studies will be used here. While this would seem appropriate considering the minimal amount of bioassay data available for the site, why would the historical sediment data be more appropriate than the sediment data taken in 2009? Will the most recent 2009 Site-specific data be used to calibrate the predictive BERA model?

3. It was difficult to determine the COPCs excluded for each media as a result of the refinement performed in this Work Plan. A reference table with the excluded COPCs by media would be helpful.

4. For the discussions related to the Area Use Factors, it would seem appropriate to initially consider the most conservative assumptions (e.g. receptor would use the entire site) and refine those assumptions accordingly based on site specific information.

Specific Comments

1. 2.3 Identification of Surface Water COPC - The discussion on page 13, paragraph 1 discusses the detection of dioxin/furan congeners and caprolactam in surface water and the body burden approach proposed for fish. Please refer to the general comment number (1) in the Draft Fish and Invertebrate Tissue Sampling and Analysis Plan (SAP) comments below.

2. 2.6.2.3 Benthic Invertebrate COPC Summary - PCB Congeners and Dioxin/Furan congeners, particularly 2,3,7,8-TCDD, were not proposed to be carried forward as COPCs for benthic invertebrates in the BERA. Given their potential to be risk drivers and the frequency of detection in the most recent 2009 sampling events (Anchor 2010, Sections 3.1.6, 3.1.7) please explain the rationale for these COPCs not being carried forward in the BERA. The high frequency of detection and elevated concentrations in a number of samples would seem to make these COPCs especially favorable for evaluation to benthics based on the most recent data.

3. 2.6.3.2 Bioaccumulative COPCs - When calculating the BSAF to assess effect to fish from bioaccumulative COPCs, were the sediment concentrations used in the BSAF calculations based on the most recent sediment data collected in 2009?

4. 3.3.2.2 Measurement Endpoints - In the section Whole Body Tissue Concentrations Compared to TRVs and Estimated Toxicity Using Predictive Models, there is concern that the selected COPCs and the predictive sediment model developed for benthic invertebrates may not be adequate to evaluate potential risk to fish. Please refer to comment number (1) in the SAP general comments below.

5. 4.2 Sediment Toxicity - Will the most recent chemistry data collected in 2009 be incorporated into the predictive model or will the predictive model only include data from 2000-2006? Please refer to comment (2) in the BERA Work Plan general comments above.

Draft Fish and Invertebrate Tissue Sampling and Analysis Plan Comments:

General Comment

1. It seems problematic that there will not be tissue samples from any fish prey group analyzing dioxin/furan congeners, particularly 2,3,7,8-TCDD. As noted in the COPC Report and Amendment, Section 3.3.2 (Anchor 2008a, 2008b) and the Response to Agency Comments on the Draft Selection of Contaminants of Potential Concern for Ecological Risk Assessment (Anchor 2008c) TCDD was identified as an uncertain COPC in invertebrates due to their insensitivity to this chemical from the lack of the Ah receptor. Fish were identified as being sensitive to this class of chemicals and TCDD was

retained as a COPC for fish. It appears from Table 3-4 of the Fish and Invertebrate Tissue Sampling and Analysis Plan (SAP) that invertebrate prey groups 1A and 1B *only* will be sampled for dioxin/furan congeners. Please discuss how the prey groups identified to be sampled in the SAP will adequately fill data gaps and ensure there would not be unacceptable risk to fish from dioxins, and TCDD in particular. Fish tissue samples for this COPC may be necessary.

References:

Parsons et al., 2002. Assessment of Sediment Toxicity and Quality in Patrick Bayou, Segment 1006, Harris County, Texas.

Parsons et al., 2004. Assessment of Sediment Toxicity and Quality in Patrick Bayou, Segment 1006, Harris County, Texas.

Anchor, 2008a. Selection of Contaminants of Potential concern for Ecological Risk Assessment Technical Memorandum. Patrick Bayou Superfund Site, Deer Park, Texas. May 2008.

Anchor, 2008b. Amendment to the Selection of Contaminants of Potential Concern for Ecological Risk Assessment Technical Memorandum. Patrick Bayou Superfund Site, Deer Park, Texas. October 2008.

Anchor, 2008c. Response to Agency Comments on the Draft Contaminants of Potential Concern for the Ecological Risk Assessment. Patrick Bayou Superfund Site, Deer Park, Texas. July 2008.

Anchor, 2010. Sediment and Surface Water Contaminant of Potential Concern Delineation Report. Patrick Bayou Superfund Site, Deer Park, Texas. May 2010.